

Dr Hussein Dia

F.ASCE F.IEAust F.ITE CPEng

Publications

Hussein has published the following:

- 2 Theses on Intelligent Transport Systems and Transport Operational Research Topics
- 4 Book chapters on Intelligent Transport Systems
- 17 Journal papers on Intelligent Transport Systems and Traffic Simulation and Modelling
- 74 Conference papers on Intelligent Transport Systems, Traffic Simulation, Traffic and Transport Engineering
- 20 Technical Reports

Publications List

Theses

- [T.02] Dia, H. (1996). *Artificial Neural Network Models for Automated Freeway Incident Detection*. Doctor of Philosophy Thesis, Monash University, Australia.
- [T.01] Dia, H. (1985). *Transport Applications of Vehicle Routing using the Postman Algorithm*. M.Sc. Thesis, Purdue University, USA.

Chapters in Books

- [B.04] Smit, R., **Dia, H.** and Morawska, L. (2009). Road Traffic Emission and Fuel Consumption Modelling: Trends, New Developments and Future Challenges. In *Traffic Related Air Pollution*. Editors S. Demidov and J. Bonnet, pp. 29-68, Nova Science Publishers.
- [B.03] **Dia, H.** (2001). Towards Sustainable Transportation- The Intelligent Transportation Systems Approach. In *Towards Sustainability in the Built Environment*. Shanableh, A. and Chang WP (editors). pp. 412-422.
- [B.02] **Dia, H.** and Rose, G. (1998a). The impact of data quantity on the performance of neural network freeway incident detection models. In *Neural Networks in Transport Applications*. Himanen, V., Nijkamp, P. and Reggiani, A. (editors), pp. 311-340.
- [B.01] **Dia, H.** and Rose, G. (1998b). Assessing the performance of artificial neural network incident detection models. In *Transportation Networks: Recent Methodological Advances*, Bell, MGH (editor), pp. 255-272. (Pergamon)

Journal Papers

- [J.17] **Dia, H.** and Panwai, S. (2011). Neural Agent (Neugent) Models of Driver Behavior for Supporting ITS Simulations. *International Journal of Intelligent Transportation Systems Research: Volume 9, Issue 1*, pp. 23-36 ... [more](#)
- [J.16] **Dia, H.** and Thomas, K. (2010). Development and evaluation of arterial incident detection models using fusion of simulated probe vehicle and loop detector data, *Information Fusion, special issue on Intelligent Transport Systems*, pp. 20-27 ... [more](#)
- [J.15] **Dia, H and Panwai, S (2010)**. Evaluation of discrete choice and neural network approaches for modelling driver compliance with traffic information. *Transportmetrica*, 6(4), pp. 249-270 ... [more](#)
- [J.14] Stirzaker, C. and **Dia, H.** (2007). Evaluation of Transportation Infrastructure Management Strategies Using Microscopic Traffic Simulation. *Journal of Infrastructure Systems*, Volume 13, No. 2, pp. 168-174 ... [more](#)
- [J.13] Panwai, S. and **Dia, H.** (2007). Neural Agent Car-Following Models. *IEEE Transactions on Intelligent Transportation Systems*. Volume 8, Issue 1, pp. 60-70.
- [J.12] **Dia, H.** and Panwai, S. (2007). Modelling drivers' compliance and route choice behaviour in response to travel information. Special issue on Modelling and Control of Intelligent Transportation Systems, *Journal of Nonlinear Dynamics*, Volume 49, Number 4, September, 2007 (Springer).

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- [J.11] Thomas, K. and **Dia, H.** (2006). Comparative Evaluation of Freeway Incident Detection Models Using Field Data. IEE Proceedings on Intelligent Transport Systems, Vol. 153, No. 3, pp. 230-241, The Institution of Engineering and Technology, UK.
- [J.10] **Dia, H.** and Cottman, N. (2006). Evaluation of Arterial Incident Management Impacts Using Traffic Simulation. IEE Proceedings on Intelligent Transport Systems, Vol. 153, No. 3, pp. 242-252, The Institution of Engineering and Technology, UK. **[Invited Paper]**
- [J.09] Panwai, S. and **Dia, H.** (2005). Comparative Evaluation of Microscopic Car Following Behaviour. IEEE Transactions on Intelligent Transportation Systems, Vol 6, No 3, Sep 2005, pp 314-325.
- [J.08] Nigarnjanagoo, S. and **Dia, H.** (2005). Evaluation of a Dynamic Signal Optimisation Control Model using Traffic Simulation. Special Issue on the Computerization of Transportation: Sophisticated Systems Incorporating IT in the Mobility of People and Goods. Journal of International Association of Traffic and Safety Sciences, 29(1), pp. 22-30.
- [J.07] Thomas, K. and **Dia, H.** (2004). Development and evaluation of fractal dimension models for freeway incident detection. Road and Transport Research Journal, Vol 13, No. 2, pp 2-20, June 2004. **[Invited Paper]**
- [J.06] **Dia, H.** (2002). An agent-based approach to modelling driver route choice behaviour under the influence of real-time information. Transportation Research-C, 10(5-6). Special Issue on Intelligent Agents in Traffic and Transportation, pp 331-349.
- [J.05] **Dia, H.** (2001). An object-oriented neural network approach to short-term traffic forecasting. European Journal of Operations Research, 131(2), pp. 253-261. **[Best Paper Award]**
- [J.04] **Dia, H.**, Harney, D. and Boyle, A. (2001). Dynamics of drivers' route choice decisions under advanced traveller information systems. Roads and Transport Research. Vol. 10, No. 4, ARRB Transport Research Ltd, Vermont South, Victoria, Australia. pp. 2-12.
- [J.03] **Dia, H.** and Purchase, H. (1999). Modelling the impacts of advanced traveller information systems using Intelligent Agents. *Road and Transport Research*, Vol. 8, No. 3, September 1999, ARRB Transport Research Ltd, Vermont South, Victoria, Australia. pp. 68-73. **[Invited Paper]**
- [J.02] **Dia, H.** and Rose, G. (1998). Development and evaluation of neural network freeway incident detection models using field data. Transportation Research-C, **5(5)**. Special Issue on the Applications of Neural Networks in Transportation, pp. 313-331.
- [J.01] Elkarmi, A. and **Dia, H.** (1993). A Stochastic Model for the Assessment of the Environmental Risks from Genetically Modified Microorganisms. *DIRASAT (Series B: Pure and Applied Sciences)*, Vol. 20B, No. 1, 1993, pp. 119-129.

CONFERENCES AND PRESENTATIONS

INVITED PRESENTATIONS

- [C.74] Dia, H (2012). Delivering world class ITS operations, Road Engineers Association for Asia and Australasia, New Zealand, August 2012
- [C.73] Dia, H and Boongrapue, N. (2011). Instantaneous vehicle emission models for evaluating environmental impacts of ITS. Proceedings of ITS World Congress, Florida
- [C.72] Dia, H (2011). Next generation ITS and proactive transport technologies. ITS Summit, Gold Coast
- [C.71] Dia, H (2011). Connected mobility for smart cities. Asia Pacific Cities Summit, The Business of Cities, Brisbane, 6-8 July 2011
- [C.70] Dia, H (2011). Evaluation of impacts of ITS using traffic simulation. IPENZ Transportation Group Conference, Auckland, New Zealand
- [C.69] Dia, H (2010). The Global ITS sector – current situation and future trends. AITPM ITS Workshop, Brisbane, August 2010.

CONFERENCE AND OTHER PROCEEDINGS AND PRESENTATIONS

- [C.68] Dia, H (2011). Shaping smart cities of the future. National Outlook Magazine, Tomorrow's Cities Today, Spring 2011
- [C.67] Dia, H. (2011). Connected mobility for smart cities. Highway Engineers Australia, September 2011
- [C.66] Tey, L.S, Ferreira, L and Dia, H. (2009). Evaluating Cost-effective Railway Level Crossing Protection Systems. Australian Transport Research Forum, New Zealand.
- [C.65] Dia, H, Smit, R and Morawska, L (2010). Future Trends in Modelling Road-Based Pollutant Emissions and Fuel Consumption. Proceedings of the Australian Institute of Traffic Planning and Management (AITPM) National Conference 2010, 20-23 July, Brisbane, Australia
- [C.64] Dia, H. (2009). Evaluation of the Impacts of Traveller Information Systems. Invited presentation. Australian ITS Summit, Melbourne, Australia
- [C.63] Dia, H. (2009). Evaluation of Incident Management Strategies using Traffic Simulation. Invited presentation. QUT ITS Symposium, Brisbane.
- [C.62] Mojarrabi, B, Gwal, AK, **Dia**, H and Bhattacharya, S (2009). First Passage Time Anisotropy: Upgrading the Criterion for Superstatistical Framework of Social and Transport Network. Proceedings of the Eastern Asia Society for Transportation Studies, Vol.7
- [C.61] Tey, L, Ferreira, L and **Dia, H** (2009). Evaluating Cost-effective Railway Level Crossing Protection Systems.

- Proceedings of 32nd Australasian Transport Research Forum, Auckland, New Zealand.
- [C.60] Dia, H and Panwai, S (2009). Models of Driver Behaviour for supporting vehicle telematics and ITS simulations. Proceedings of the 10th ITS Asia Pacific Forum and Exhibition, 8-10 July 2009, QSNCC, Bangkok, Thailand.
- [C.59] Dia, H., Gondwe, W. and Panwai, S. (2009). Impact Assessment of Incidents and Incident Management Strategies. Proceedings of the 10th ITS Asia Pacific Forum and Exhibition, 8-10 July 2009, QSNCC, Bangkok, Thailand.
- [C.58] **Dia, H.**, Gondwe, W. and Panwai, S. (2008). Traffic Impact Assessment of Incident Management Strategies. Proceedings of the 11th International IEEE Conference on Intelligent Transportation Systems, Beijing, China, Vol 1, pp. 441-446.
- [C.57] **Dia, H.** and Gondwe, W. (2008). Evaluation of incident impacts on integrated motorway and arterial networks using traffic simulation. Proceedings of the 31st Australasian Transport Research Forum, Gold Coast, Australia, Vol. 1, pp 563-575.
- [C.56] **Dia, H.** and Panwai, S. (2008). Nanoscopic traffic simulation: Enhanced models of driver behaviour for ITS and telematics simulations. Proceedings of the 3rd International Symposium on Transport Simulation (ISTS08), Gold Coast, Australia, Vol. 1, pp 1-27.
- [C.55] Panwai, S. and **Dia, H.** (2006b). A Fuzzy Neural Approach to Modelling Behavioural Rules in Agent-Based Route Choice Models. Proceedings of the Fourth International Workshop on Autonomous Agents in Traffic and Transportation, Conference on Autonomous Agents and MultiAgent Systems, 2006, Hakodate, Japan.
- [C.54] Panwai, S. and **Dia, H.** (2006a). Stability analysis and macroscopic evaluation of agent-based car following models. Proceedings of the 8th Asia Pacific Intelligent Transport Systems forum and Exhibition, Hong Kong, pp. 1-10, Ed (Jason Wong, William H.K. Lam, S.C. Wong and H.W. Ho)
- [C.53] Nigarnajagool, S. and **Dia, H.** (2006). A Multi-Agent Approach to Real-Time Traffic Signal Optimisation. Proceedings of the 29th Australasian Transport Research Forum, pp. 1-16, Gold Coast, Australia.
- [C.52] **Dia, H.** and Cottman, N. (2006). Modelling the Environmental Benefits of ITS using Power-Based Vehicle Emissions Models. Proceedings of the ITS World Congress, 8-12 October, 2006, London, England, pp. 1-12.
- [C.51] **Dia, H.**, Panwai, S., Boongrapue, N., Ton, T. and Smith, N. (2006). Comparative Evaluation of Power-Based Environmental Emissions Models. Proceedings of the

- 2006 IEEE Intelligent Transportation Systems Conference, Toronto, Canada, pp. 1251-1256.
- [C.50] **Dia, H.** and Panwai, S. (2006). Comparative Evaluation of Models of Route Choice and Driver Compliance with Traffic Information. Proceedings of the the 29th Australasian Transport Research Forum, pp. 1-12, Gold Coast, Australia.
- [C.49] **Dia, H.,** Gondwe, W. and Panwai, S. (2006). A Traffic Simulation Approach to Evaluating the Benefits of Incident Management. Proceedings of the 29th Australasian Transport Research Forum, pp. 1-14, Gold Coast, Australia
- [C.48] Winyoopadit, S. and **Dia, H.** (2005). Development and Evaluation of Ramp Metering Algorithms. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.47] Thomas, K. and **Dia, H.** (2005). Neural Network Incident Detection on Arterials using Fusion of Simulated Probe Vehicle and Loop Detector Data. Proceedings of the 12th ITS World Congress, San Francisco, California, November 6-10 2005.
- [C.46] Sutandi, C. and **Dia, H.** (2005). Performance Evaluation of an Advanced Traffic Control System in a Developing Country. Accepted for Presentation and Publication in the Proceedings of the 6th EASTS Conference, Bangkok, Thailand, September 21-24, 2005.
- [C.45] Sutandi, C. and **Dia, H.** (2005). Evaluation of the impacts of traffic signal control parameters on network performance. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.44] Poon, N. and **Dia, H.** (2005). Evaluation of Toll Collection Performance using Traffic Simulation. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland. **[Best Paper Award].**
- [C.43] Panwai, S. and **Dia, H.** (2005d).A Reactive Agent-Based Neural Network Car Following Model. Proceedings of the 8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005), September 13-16, 2005, Vienna, Austria, pp. 326-331. **[Acceptance Rate: 67 per cent]**
- [C.42] Panwai, S. and **Dia, H.** (2005c).Development and Evaluation of a Reactive Agent-Based Car Following Model. Proceedings of the Intelligent Vehicles and Road Infrastructure Conference (IVRI '05), 16th and 17th February 2005, Melbourne, Australia. **[Best Paper Award]**
- [C.41] Panwai, S. and **Dia, H.** (2005b). Microscopic, Macroscopic and Stability Analysis of Reactive Agent-

- based Car Following Models. Proceedings of the 27th Conference of Australian Institutes of Transport Research, Brisbane, Queensland, 7-9 Dec 2005.
- [C.40] Panwai, S. and **Dia, H.** (2005a). Modelling Route Choice Behaviour under the Influence of Real Time Traffic Information using Agent-Based Fuzzy Neural Techniques. Proceedings of the 27th Conference of Australian Institutes of Transport Research, Brisbane, Queensland, 7-9 Dec 2005.
- [C.39] Nigarnjanagool, S. and **Dia, H.** (2005). Evaluation of a Coordinated and Real Time Signal Optimisation Model Using Traffic Simulation. Proceedings of the 27th Conference of the Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.38] Gondwe, W. and **Dia, H.** (2005). Evaluation of the benefits of incident management on the arterial and motorway road networks using microscopic simulation. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.37] Boongrapue, N, **Dia, H.** and Zito, R (2005). Modelling of Vehicle Emissions Using Traffic Simulation. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.36] **Dia, H.**, Panwai, S, Boongrapue, N, Ton, T and Smith, N. (2005). Implementation of Power-Based Fuel Consumption and Environmental Emissions Models in Traffic Simulation. Proceedings of the 27th Conference of Australian Institutes of Transport Research, 7-9 December 2005, Brisbane, Queensland.
- [C.35] Stirzaker, C. and **Dia, H.** (2004). Optimal Utilisation of Road Infrastructure using Traffic Simulation. Presented at the Workshop on Traffic Simulation, Bridging Theory and Practice, 5-6 August 2004, Customs House, Brisbane, Australia.
- [C.34] Panwai, S. and **Dia, H.** (2004). A Reactive Agent-Based Approach to Modelling Car Following Behaviour. Proceedings of the 26th Conference of Australian Institutes of Transport Research (CAITR), 8-10 December 2004, Melbourne, Victoria.
- [C.33] Thomas, K. and **Dia, H.** (2004b). Incident Detection on Arterials using Neural Network Data Fusion of Simulated Probe Vehicle and Loop Detector Data. Proceedings of the 26th Conference of Australian Institutes of Transport Research (CAITR), 8-10 December 2004, Melbourne, Victoria.
- [C.32] Thomas, K. and **Dia, H.** (2004a). Simulation of Lane-Blocking Incidents and Probe Vehicle Data for Development of Automated Arterial Incident Detection

- Models. Presented at Workshop on Traffic Simulation (Bridging Theory and Practice), Customs House, Brisbane, Queensland, 5-6 August, 2004.
- [C.31] Panwai, S. and **Dia, H.** (2004). Comparative Evaluation of Car Following Models. Presented at Workshop on Traffic Simulation (Bridging Theory and Practice), Customs House, Brisbane, Queensland, 5-6 August, 2004.
- [C.30] Nigarnjanagool, S. and **Dia, H.** (2004). An Application of a Signal Optimisation Model in Traffic Simulation. Presented at Workshop on Traffic Simulation (Bridging Theory and Practice), Customs House, Brisbane, Queensland, 5-6 August, 2004.
- [C.29] **Dia, H.** and Panwai, S. (2004). Modelling Dynamic Driver Behaviour in Response to Travel Information. Presented at Workshop on Traffic Simulation (Bridging Theory and Practice), Customs House, Brisbane, Queensland, 5-6 August, 2004.
- [C.28] **Dia, H.** and Cottman, N. (2004). Evaluation of Incident Management Benefits using Traffic Simulation. Presented at Workshop on Traffic Simulation (Bridging Theory and Practice), Customs House, Brisbane, Queensland, 5-6 August, 2004.
- [C.27] Panwai, S. and **Dia, H.** (2003). Evaluation of Microscopic Car-Following Behaviour. Proceedings of the 25th Conference of Australian Institutes of Transport Research (CAITR), The University of South Australia, Adelaide, 3-5 December 2003.
- [C.26] Nigarnjanagool, S. and **Dia, H.** (2003). Development and Evaluation of an Agent-Based Adaptive Traffic Signal Control System. Proceedings of 25th Conference of Australian Institutes of Transport Research (CAITR), The University of South Australia, Adelaide, 3-5 December 2003.
- [C.25] **Dia, H.** and Cottman, N. (2002). Evaluation of Incident Management Benefits using Traffic Simulation. Proceedings of the 13th Mini-EURO Conference and the 9th Meeting of the EURO Working Group on Transportation, Politechnic University of Bari, June 10-13, Bari, Italy.
- [C.24] Thomas, K., **Dia, H.** and Cottman, N. (2001). Simulation of arterial incident detection using neural networks. Proceedings of the 8th World Congress on Intelligent Transport Systems, Sydney, 30 September - 4 October, 2001.
- [C.23] Cottman, N., **Dia, H.** (2001). Simulation of ITS Impacts on Network Performance. Proceedings of the Conference of Australian Institutes of Transport Research 2001, Melbourne, Victoria, 10-12 December 2001, pp. 1-11
- [C.22] Cottman, N., **Dia, H.** and Thomas, K. (2001). Assessment of incident-induced impacts on the performance of an

- arterial network. Proceedings of the 8th World Congress on Intelligent Transport Systems, Sydney, 30 September - 4 October, 2001.
- [C.21] **Dia, H.** (2001). Automated Incident Detection Algorithms. Proceedings of the Smart.Traffic, Deploying Incident Management Conference, 1- 3 May 2001, Brisbane, Australia.
- [C.20] **Dia, H.** (2000c). A Conceptual framework for modelling the environmental impacts of intelligent transport systems. Proceedings of the XI Pan American Conference in Traffic and Transportation Engineering, 19-23 November, 2000, Gramado, Rio Grande do Sul, Brazil. pp. 643-654. **(acceptance rate: 16%).**
- [C.19] **Dia, H.** (2000b). Towards Sustainable Transportation: The Intelligent Transportation Systems Approach. Proceedings of "Shaping the Sustainable Millennium- Collaborative Approaches" Conference to be held at Queensland University of Technology, Brisbane, 5-7 July 2000.
- [C.18] **Dia, H.** (2000a). A conceptual framework for modelling dynamic driver behaviour using intelligent agents. Proceedings of the 6th International Conference on Applications of Advanced Technologies in Transportation Engineering, 28-30 June 2000, Singapore.
- [C.17] **Dia, H.,** Harney, D. and Boyle, A. (2000). Analysis of Commuters' Responses to Travel Information: Implications for ATIS Deployment in Brisbane. Proceedings of the 22nd Conference of Australian Institutes of Transport Research (CAITR 2000), 6-8 December, 2000, the Australian National University, Canberra, ACT, Australia.
- [C.16] Thomas, K. and **Dia, H.** (2000b). A Neural Network Model for Arterial Incident Detection Using Probe Vehicle and Loop Detector Data. Proceedings of the 22nd Conference of Australian Institutes of Transport Research (CAITR 2000), 6-8 December, 2000, the Australian National University, Canberra, ACT, Australia.
- [C.15] Thomas, K. and **Dia, H.** (2000a). Incident Detection by Fractal Dimension Analysis of Loop Detector Data. Proceedings of the 22nd Conference of Australian Institutes of Transport Research (CAITR 2000), 6-8 December, 2000, the Australian National University, Canberra, ACT, Australia.
- [C.14] Cottman, N.J. and **Dia, H.** (2000). A Methodology for Modelling the Environmental Impacts of Intelligent Transport Systems. Proceedings of the 22nd Conference of Australian Institutes of Transport Research (CAITR 2000), 6-8 December, 2000, the Australian National University, Canberra, ACT, Australia.
- [C.13] **Dia, H.** (1999c). Assessing the environmental impacts of intelligent transport systems. *Proceeding of the 21st*

- Conference of Australian Institutes of Transport Research (CAITR '99), 8-10 December, 1999, Emmanuel College, the University of Queensland, Brisbane, Australia.*
- [C.12] **Dia, H.** (1999b). An object-oriented neural network approach to short-term traffic forecasting. *Proceedings of the 11th Mini-Euro Conference on Artificial Intelligence in Transportation Systems and Science*, 2-6 August 1999, Helsinki, Finland, pp. XLII-1 to XLII-5. **(Best Paper Award)**
- [C.11] **Dia, H.** (1999a). Freeway travel time estimation using neural networks. *Proceedings of the Intelligent Transport Systems Australia 4th International Conference, Smart Solutions at Work*, 18-21 May 1999, Adelaide.
- [C.10] **Dia, H.** (1998). Neural network models for arterial incident detection using probe vehicles and fixed detector data. *Proceeding of the 20th Conference of Australian Institutes of Transport Research*, 14-15 December, 1998, Institute of Transport Studies, University of Sydney, Australia.
- [C.09] **Dia, H.** and Funes, C. (1998). A client-server architecture for a real-time traffic information system on the Internet. *Proceedings of the 19th ARRB Transport Research Ltd Conference, Roads 98: Investing in Transport*, Sydney, Australia, December 7-11, 1998, pp. 50-70 (Available on CD only).
- [C.08] **Dia, H.** and Rose, G. (1997). A variable threshold incident detection model. *Journal of the Eastern Asia Society for Transportation Studies, Proceedings of the 2nd EASTS Conference, Seoul, Korea, Vol. 2, No. 4*, pp. 1329-1345.
- [C.07] **Dia, H.** and Rose, G. (1996c). Impact of data quality on the performance of neural network incident detection models. *Proceedings of the Third World Congress on Intelligent Transport Systems '96*, Orlando, Florida, USA, October 14-18, 1996, pp. 241 (available on CD only).
- [C.06] **Dia, H.** and Rose, G. (1996b). Assessing the performance of artificial neural network incident detection models. *Presented at the 4th Meeting of the EURO Working Group on Transportation*, University of Newcastle upon Tyne, UK, 9-11 September 1996.
- [C.05] **Dia, H.** and Rose, G. (1996a). Development of artificial neural network models for automated detection of freeway incidents. *Proceedings of the 7th World Conference on Transport Research, Sydney, Australia*. Vol. 2, Modelling Transportation Systems, Elsevier Science, U.K. Hensher, D. and King, J. editors, pp. 107-122.
- [C.04] **Dia, H.,** Rose, G. and Snell, A. (1996). Comparative performance of freeway automated incident detection algorithms. *Proceedings of Roads 96: Joint 18th ARRB Transport Research Conference & Transit New Zealand Land Transport Symposium*, Christchurch, New Zealand, September 1996, Part 7, pp. 359-374.

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F.ASCE F.IEAust F.ITE CPEng

- [C.03] Rose, G. and **Dia, H.** (1995). Freeway automatic incident detection using artificial neural networks. *Proceedings of the International Conference on Application of New Technology to Transport Systems*, Vol. 1, Melbourne, Australia, pp. 123-140.
- [C.02] **Dia, H.** (1994). Neural network models for freeway incident detection. *Proceeding of the 16th Conference of Australian Institutes of Transport Research*, University of South Australia, Adelaide, Australia.
- [C.01] **Dia, H.** (1993). Freeway incident detection using artificial neural networks. *Proceedings of the 15th Conference of Australian Institutes of Transport Research*, Melbourne University, Melbourne, Australia.